

Problems in Information Systems Development

Based on Chapter 2 of Bennett, McRobb and Farmer:

Object Oriented Systems Analysis and Design Using UML, (3rd Edition), McGraw Hill, 2005.

In This Lecture You Will Learn:

- The main players in an IS project
- The problems in IS development
- The underlying causes of these problems
- How the *stakeholder* concept helps identify ethical issues in IS development
- The costs of problems and ethical issues

The Main Players

- Three main types of player are involved in an IS development project:
 - Those who will benefit from the system's outputs, directly or indirectly (end-users)
 - Those who commission the project, pay for it or have the power to halt it (owners or sponsors)
 - Those who will produce the software (developers)

What Do We Mean by Problem?

- An IS project may fail before delivery
 - The LSE Taurus project was cancelled
- An IS may fail after delivery
 - The LAS system was withdrawn after implementation
- An IS may be continue to be used, despite causing problems to its users, its owners or its developers

End-user View

- End-users may directly operate the software, or may be more remote, e.g. a manager who receives printed reports
- Typical concerns include:
 - A system that is promised but not delivered
 - A system that is difficult to use
 - A system that doesn't meet its users' needs

Owner View

- Owners care about meeting business needs and about value for money
- Typical concerns include:
 - Projects that overspend their budget (may no longer have a net benefit)
 - Systems that are delivered too late
 - Badly managed projects
 - Systems that are rendered irrelevant by events

Developer View

- IS developers sometimes have a difficult time
 - Budget and time constraints often conflict with doing the job properly
 - Users and owners may not know how to ask for what they really want
 - Technologies, development approaches and business needs all constantly change

Why Things Go Wrong

- Whether a system is delivered or not, many things can go wrong
- Flynn (1998) categorizes the main causes as:
 - Quality problems
 - Productivity problems

Quality Problems

- The wrong problem is addressed
 - Failure to align the project with business strategy
- Wider influences are neglected
 - Project team or business managers don't take account of the system environment
- Incorrect analysis of requirements
 - Poor skills or not enough time allowed
- Project undertaken for wrong reason
 - Technology pull or political push

Productivity Problems

- Users change their minds
- External events
 - E.g. introduction of the Euro currency
- Implementation not feasible
 - May not be known at start of the project
- Poor project control
 - Inexperienced management or political difficulties

Ethics Issues and Stakeholder Problems

- Some IS may affect people far beyond obvious users and owners of the system
 - Cellphone companies collect data about subscribers' calls and physical movements
 - This data can be passed to police and many other government agencies
 - Do you know what data is stored about you? Who by? And what it is used for?

Stakeholder Analysis

- This approach tries to identify everyone affected by a proposed IS
 - Who are the stakeholders?
 - How does the system affect each group?
 - What are their legitimate concerns?
 - Are there any legal implications, e.g. Data Protection Act in the UK?

Summary

In this lecture you have learned about:

- The main players in an IS project, and how they perceive the potential problems
- The origins of the main types of problem
- How stakeholder analysis can help identify ethical impacts of an IS

References

- Flynn (1998)

(For full bibliographic details, see Bennett, McRobb and Farmer)

See also www.ccsr.cse.dmu.ac.uk